

6357

WIRE DRAG

6357 WIRE DRAG

Form 504 Rev. April 1935	
DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
6357 W.D.	
Topographic Hydrographic	Sheet No. NO. 2 W.D. Wire Drag
State Alaska	
LOCALITY	
Sitka Harbor — Sitka Sound	
Northerly Approaches	
193 8.	
CHIEF OF PARTY	
G. C. Jones	

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO.

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. W.D. NO. 2

REGISTER NO. 6357 W.D. H 6357 W.D.

State S. E. Alaska

General locality Sitka Harbor

Locality Northerly Approaches  
~~Sitka Harbor~~

Scale 1:5,000 Date of survey June - August, 1938.

Vessel U.S.C. & G.S.S. EXPLORER

Chief of Party G. C. Jones

Surveyed by G. C. Jones

Protracted by H. C. Applequist

Soundings penciled by H. C. Applequist

Soundings in <sup>fathoms</sup>~~fathoms~~ / feet

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by H. C. Applequist

Inked by H.F. Stegman

Verified by H.F. Stegman

Instructions dated March 7 and May 5, 1938.

Remarks: Project - HT-220.

DESCRIPTIVE REPORT

TO ACCOMPANY WIRE DRAG SHEET NO. 2,

OFFICE REGISTER NO. 6357 W.D.

SITKA HARBOR - S.E. ALASKA

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G. C. JONES, CHIEF OF PARTY, C. & G. S.

# DESCRIPTIVE REPORT

TO ACCOMPANY WIRE DRAG SHEET NO. 2,

OFFICE REGISTER NO. 6357 W.D.

SITKA HARBOR - S.E. ALASKA

1938.

## AUTHORITY:

Authority for this survey is contained in the Director's Instructions dated March 7, 1938, and Supplemental Instructions dated May 5, 1938, Project No. HT-220.

## SCALE:

The scale of this survey is 1:5,000.

## LIMITS:

This survey covers the area of the north part of Chart No. 8244. It includes Sitka Harbor, extending about 400 meters south of McGraths Dock, all of Whiting Harbor, and to the north it covers the area up to Latitude  $57^{\circ}04.3'$ . The southwest portion of the sheet joins Wire Drag Sheet No. 1, Office Register No. 6366 W.D.

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## SURVEY METHODS:

Standard gear and methods were used on most of the sheet. A skiff drag, described in previous reports, was devised for the restricted area in Sitka Harbor and was also used for some of the close inshore work to the northward.

On "p" day the skiff drag was used to relocate the boulders in the dredged channel near Harbor Rock, so that they could be located by fixes plotable on the 1:1,000 hydrographic sheet. Slight revision in depths and location was made at the same time. The depths and locations from that day's work should be used because of more care being taken by the observer in standing close alongside the lead-line and the leadsman and in reading to tenths of feet. See letter of August 30, 1938, transmitting revised list of dangers in Sitka Harbor and vicinity. No drag line was plotted, none being intended for "p" day.

In verifying, note should be taken of the fact that there are no floats on the ground wire of the skiff drag so that a stop does not cause a break in the drag line. On occasions the inshore end

of the skiff drag was too close and fouled; the skiff was stopped and cleared by the tender. In such cases the line was plotted as continuous.

SMOOTH PLOTTING: See par. 5b, review.

All positions were plotted and all the subdividing done on the smooth sheet. As each strip was completed, it was traced on strips of tracing paper, in ink. Different colors were used on the strips in order to facilitate the making of the depth-area diagram. At first it was not intended to save and forward these tracings but later it was decided that due to the congested nature of the work, they might prove of assistance in the verification of the sheet. They are therefore being forwarded with the smooth sheet.

The drag strips were not inked on the smooth sheet as it was felt that too much of the work would be obscured. The depth-area diagram was inked in accordance with the Manual.


Triangulation station "BLACK-1938", does not fall on this sheet, but as it was used, a temporary "dogs-ear" was attached to the sheet. When the plotting was completed, this was removed.

COMPARISON WITH HYDROGRAPHIC SHEETS:

The depth-area diagram was compared to Hydrographic Sheets Office Register No's. 6351, 6352, 6354, and 6355. Copies of the depth-area diagram changed to the scale of the hydrographic sheet were used in the comparisons. No soundings on the hydrographic sheets were found shoaler than the corresponding effective depth from the drag sheet.

Par. 5, review<sup>3</sup>

Respectfully submitted,

  
G. C. Jones,  
Chief of Party, C. & G. S.,  
Comdg. U.S.C. & G.S.S. EXPLORER.

# STATISTICS

TO ACCOMPANY WIRE DRAG SHEET NO. 2

OFFICE REGISTER NO. 6357 W.D.

DATE	DAY LETTER	DRAG LENGTH IN FEET	POSITIONS (SEE NOTE)	STATUTE MILES	SOUNDINGS
June 6	a	2000 1000	58	2.6	10
June 8	b	400 350 300	64	2.5	12
June 9	c	300 400	43	0.5	2
June 10	d	400 300	57	0.7	17
June 11	e	300	21	1.0	5
June 24	f	3500 2800	26	1.8	7
June 28	g	2800 800	30	1.2	15
June 29	h	2400 4000	82	4.6	21
June 30	j	4000 3200	44	2.5	16
July 6	k	1200	74	2.1	10
July 8	l	600	21	1.0	0
Aug. 20	m	600	27	0.8	2
Aug. 23	n	600 450	45	1.2	9
Aug. 24	p	---	12	---	12
Aug. 25	q	Not plotted, covers previously dragged area.			
TOTALS			604	22.5	108 <sup>3</sup>

STATISTICS - CONTINUED

NOTE: "Positions" under statistics includes sounding positions.

Area in square statute miles 2.7

TIDAL NOTE

STANDARD OIL DOCK, MILLS WHARF, SITKA, ALASKA

M.L.L.W. on staff 5.0

Highest tide observed on staff May 28, 1938 - 16.5 ft.

Lowest tide observed on staff June 29, 1938 - 1.6 ft.

INDEX TO WORKING TRACINGS

DAY	TRACING NUMBER
1 - 22 a	I
23 - 48 a	II
1 - 36 b	III
37 - 52 b	II
1 - 6 c	III
12 - 41 c	III
7 - 11 c rejected	
1 - 5 d	III
6 - 39 d	IV
1 - 17 e	IV
1 - 19 f	V
1 - 61 g	V
1 - 61 h	V
1 - 28 j	VI
1 - 21 k	II
1 - 21 l	VII
1 - 24 m	VII
1 - 35 n	VII



Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H6357** W.D.

The following statistics will be submitted with the  
cartographer's report on the sheet:

Number of positions on sheet	<i>.604. plus approx. 425 E.L. positions.</i>
Number of positions checked	<i>.260.</i>
Number of positions revised	<i>..11.. plus 84 F buoy positions changed by use of Tawline protractor</i>
Number of soundings recorded	<i>.138.. without replotting positions of E.L.</i>
Number of soundings revised	<i>...0..</i>
Number of soundings erroneously spaced	<i>.....</i>
Number of signals erroneously plotted or transferred	<i>None.</i>

Date: *June 29, 1939*

Verification by *H.F. Stegman*

Time: *13 days, 2 hrs (93 hours)*

Review by *J.A.M<sup>c</sup> Cormick 9/6/39.*

Time: *28 hr.*

HYDROGRAPHIC SURVEY NO. H6357 W. D.

Smooth Sheet Yes

Boat Shoet                      Three

Records; Sounding\* 2 Vols., Wire Drag 5 Vols., Bomb Vols.

Descriptive Report Yes

Title Shoet Yes

List of Signals -----

Landmarks for Charts (Form 567) None

Statistics	Yes
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Approved by Chief of Party None

Recoverable Station Cards (Form 524) -----

Special Chart for Lighthouse Service Yes  
(Circular Nov.30, 1933)

Hydrography: Total Days 15 ; Last Date August 25, 1938

Remarks \_\_\_\_\_

*(continued)*

H-6557

Remarks

Decisions

1		570353
2		" U S G B
3		" U S G B
4		"
5		"
6		"
7		"
8		"
9		"
10		"
11		"
12		"
13		"
14		"
15		"
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
M 234		

# GEOGRAPHIC NAMES

Survey No. **H6357** W.D.

GEOGRAPHIC NAMES										
Survey No. <b>H6357</b> <small>W.D.</small>										
Name on Survey	<div>On Chart No.</div> <div>On previous survey No.</div> <div>On U. S. quadrangle Maps</div> <div>From local information</div> <div>On local Maps</div> <div>P. O. Guide or Map</div> <div>Rand McNally Atlas</div> <div>U. S. Light List</div>									
	A.	B.	C.	D.	E.	F.	G.	H.	K.	
<u>Sitka Harbor</u>										1
<u>Sitka</u>										2
<u>Baranof Island</u>										3
<u>Mills Wharf</u>										4
<u>McGraths Dock</u>										5
<u>Whiting Harbor</u>										6
<u>Japonski Island</u>										7
<u>Battery Island</u>										8
<u>Channel Rock</u>										9
<u>Harbor Rock</u>										10
<u>Indian Rock</u>										11
<u>Harbor Island</u>										12
<u>Aleutski Island</u>										13
<u>Signal Island</u>										14
<u>Western Channel</u>										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

Names underlined in red approved

by L. Heck on 6/6/39

M 234 R

Names underlined in red approved  
by L. Heck on 6/6/39

## TIDE NOTE FOR HYDROGRAPHIC SHEET

June 1, 1939.

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. E. P. Ellis

Plane of reference approved in  
7 volumes of sounding records for

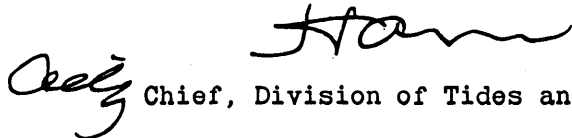
HYDROGRAPHIC SHEET 6357

Locality Northerly Approaches to Sitka Harbor

Chief of Party: G. C. Jones in 1938  
Plane of reference is mean lower low water reading  
5.0 ft. on tide staff at Sitka, Standard Oil Dock  
13.1 ft. below B. M. 1

Height of mean high water above plane of reference is 9.1 feet.

Condition of records satisfactory except as noted below:

  
Chief, Division of Tides and Currents.

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
DESCRIPTIVE REPORT  
~~X~~PHOTOSTAT~~X~~

No. H-6357 W.D.

~~X~~NOT~~X~~

received April 26, 1939  
registered May 12, 1939  
verified  
reviewed  
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
25			
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	T. B. Reed
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✓ *TBR*

# VERIFICATION REPORT

ON

H-6357 (1938) W.D.

## 1. CONDITION OF RECORDS

The records are satisfactory and conform to the requirements of the Wire Drag manual, except in the following particulars:

1. End launch position numbers, with corresponding times, were not, in general, copied in the Guide Launch record. Noted in review.

2. No notes from remarks column of E.L. record were copied in G.L. record. Noted in review

3. With a few exceptions there were no check angles on Tender <sup>positions</sup> soundings. Noted.

4. There is no record of the assignment of personnel on the Tender or End Launch. No comment in review.

5. The End Launch positions on F day are recorded in E.L. Vol. II pp 54-58 of H-6356 (1938) WD No comment.

6. On the skiff drag strips, both Guide Launch angles were taken by one observer. On M day and N day this man is recorded as being in charge and plotting as well. No comment.

7. Some of the Wire Drag day letters are recorded in upper case; others in lower case, and are so inked on the sheet. Wire Drag day letters should be in upper case with corresponding lower case for Tender record. On this sheet a different color was used for tender soundings. Noted in review.
8. Towline lengths of the End launch were not copied in the Guide Launch record, except in one or two cases. Noted.
9. There are no notes in the record indicating that there was any communication between the launches while running strips. No comment in review.
10. Some notes were apparently written in the records in pencil after the strips were completed. Probably this was done by the field plotter. For example see Vol I p-52 G.L. record. Open to question.  
No comment.
11. The Guide Launch, in most cases, did not record its courses. The End Launch ran ranges between positions. The recording of courses would have been of value to the verifier where major changes in the direction of the strip occurred. Noted in review.



The Descriptive Report states that a comparison of the wire drag work with the contemporary hydrographic sheets has been made. Discrepancies in the wire drag work itself (between tender soundings and effective depths cleared) are not mentioned. General practice is to include in the Descriptive Report a list of soundings with corresponding <sup>drag</sup> depths cleared and hung up. If this had been done it would have revealed the discrepancies noted below in Sec. 6.

Par. 5c,  
review.

## 2. SHORELINE AND SIGNALS

Shoreline and signals originate with:

T-6631 (1938) ✓

T-6634 (1938)

T-6635 (1938)

## 3. JUNCTIONS WITH CONTEMPORARY WIRE DRAG SURVEYS.

This sheet joins H-6356 (1938) W.D. near  $\phi-57^{\circ}03'$   $\lambda-135^{\circ}24'$ . The junction is satisfactory as two of the strips are continuous and the third has no groundings in the area of overlap. ✓

#### 4. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SHEETS.

The following hydrographic surveys fall entirely or in part within the limits of H-6357 (1938) WD:

H-6351 (1938)

H-6352 (1938)

H-6353 (1938) ✓

H-6354 (1938)

H-6355 (1938)

Soundings and groundings were transferred to H-6351 by the verifier (Soundings taken on P day, <sup>H-6357 WD,</sup> were plotted on the sheet in the field and verified by the writer of this report) ✓

Comparison of the drag effective depths with H-6351 will be accomplished in review.

The remaining four hydrographic sheets have not yet been verified.

Verification complete. Drag soundings transferred.

#### 5. FIELD PLOTTING.

The field plotting was neat but incomplete. The following work was added to the sheet by the verifier:

1. Added dog ear to the sheet on which A Black

was plotted and inked. No comment in review.

2. Inked and checked plotting of  $\Delta$  Apple. No comment.

3. Inked all drag strips, subdivisions, and effective depths. <sup>Noted in review</sup>

4. Added bottom characteristics to the sheet. No comment.

5. Transferred <sup>and inked</sup> all shoreline and rocks awash adjacent to drag strips from T-6634 and T-6635. <sup>Noted.</sup>

6. Plotted position 38 h End launch. This was at the start of a strip and had been omitted. <sup>No comment</sup>

7. Inked all F buoy position dots in red. No comment.

The following corrections were made by the verifier.

1. Short dash lines running from the F buoy positions toward the N buoy were plotted to conform to the times of Guide Launch positions. The field plotter had drawn them from the End Launch position times disregarding the fact that many corresponding positions were taken two to four minutes apart, on the two launches. This change affected the plotting of effective depth changes. <sup>Noted.</sup>

2. Revised 84 End Launch positions (F buoy positions) by resection, to correct for plotting with incorrect towline length. These positions were three to five MM. in error. <sup>Noted.</sup>

3. Drag strip 56-61 G was corrected in depth. It had been plotted with upright lengths instead of effective depths.

(7 feet in error)

No comment  
in review.

4. Drag subdivisions on the longer drag lengths were revised with the aid of the weighted buoy spacer.

No comment.

5. Changed the drag bight at the junction with H-6356 WD, pos 10 F to conform to the time of the junction position.

No comment

6. Changed the bight at the beginning<sup>and end</sup> of several strips to correct for difference in time of G.L. and E.L. positions.

(Note pos 1a, 1g.)

Noted in  
review.

7. Changed effective depth of sections N-2, pos. 37-38.8 b in accordance with note in tender record regarding<sup>upright</sup> length at buoy 1.

No comment  
in review.

## 6. DISCREPANCIES.

1. A minimum sdg of  $15\frac{1}{2}$  ft (pos 3e) was obtained by the tender in  $\phi-57-03.1$   $\lambda-135-20.6$ , page 23 sdg. Vol. I. It appears that this sdg is  $2\frac{1}{2}$  ft too shoal due to recording the time one hour too late. Pos. 1p (17.4 ft) falls in the same locality. It is recommended that the  $15\frac{1}{2}$  ft sdg be rejected in favor of the 17.4 ft depth.

$15\frac{1}{2}$  rejected.  
J.A.M.

These sdgs were covered with the drag set at 23 ft pos 1-4e, and 24 ft, 5-7e, without hanging. At pos 7e the Guide Launch took a sounding of 18 ft which falls in depths of 16 to 18 ft on H-6351. It appears that the effective depths on the skiff drag are unreliable due partly to the ends of the drag riding up and over obstructions, rather than hanging (No Towline was used), and to errors in skiff positions caused by one observer taking both angles. This lift of the drag is indicated by the <sup>SAC</sup> <sup>PAR. 5d,</sup> <sup>review.</sup> bight plotting slightly too long at some positions, which also indicates that the positions are erroneous. At this large scale (1:5,000) it is apparent that, even running at speeds of about 1 knot, an appreciable error is introduced by having one man do the observing.

2. Positions 10-55 G were rejected in the field due to excessive lift - stated to be 9 feet. See notes page 16, G.L. Vol II. The lift recorded in the Tender record is 1 ft. It is believed that the error was caused by comparing the upright length against the effective depth (including a tide reducer of 8 ft). As this area was apparently covered on h day, no attempt was made to reduce and plot the G day work.

~~No comm~~  
General comment  
in review.

A pencil Tracing of areas and depths was prepared by the ✓  
verifier.

June 29, 1939.

Respectfully submitted,

Harold F. Stegman

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6357 (1938) W.D. FIELD NO. 2 W.D.

Northerly Approaches, Sitka Harbor, S. E. Alaska  
Surveyed in June-August, 1938, Scale 1:5,000  
Instructions dated March 7 and May 5, 1938 (EXPLORER)

Wire Drag

Dual Control

Chief of Party - G. C. Jones  
Surveyed by - G. C. Jones  
Protracted by - H. C. Applequist  
Subdivision of wire dragged areas by - H. C. Applequist  
Verified and inked by - H. F. Stegman

1. Shoreline and Signals.

Shoreline and topographic signals are from T-6631, T-6634 and T-6635 of 1938.

2. Junctions with Wire Drag Surveys.

Overlaps with H-6356 (1938) W.D. on the south have been discussed in the review of that survey.

3. Comparison with Latest Hydrographic Surveys.

H-6351, H-6352, H-6353, H-6354 and H-6355, all of 1938.

a. Shoals.

Many shoals were encountered by the drag in the examination of the area common to the present survey and to the hydrographic surveys listed above. Individual investigations were in most cases satisfactory and do not require detailed discussion or itemized listing of positions, depths and clearances. The 8-2/6 fathom in lat. 57°03.8', long. 135°22.7' falls in 8-5/6 fathoms on H-6352 (1938) and was cleared with an effective depth of 26 feet. Greater clearance depth should have been used in this case.

b. Splits.

A split in lat. 57°04.1', long. 135°22.7' falls in 21 fathoms on H-6352 (1938). It is improbable that any navigational menace exists within its boundaries. There is also a technical split at Buoy S "1" in lat. 57°03.8', long. 135°21.8'.

c. Effective Depths.

Effective depths are, in general, considerably less than would seem to be indicated for bottom depths shown on the hydrographic surveys.

d. Conflicts.

In a few places, inshore soundings fall 10 to 15 meters inside drag strips with effective depths greater by 1 to 2 feet. The

discrepancies may be due to slight errors in position or to variable lift.

4. Comparison with Chart 8244 (New Print dated June 11, 1937)  
Chart 8255 (New Print dated May 24, 1939)  
Chart 8281 (New Print dated June 2, 1939)

In the area common to the present survey and to the hydrographic surveys discussed in the preceding paragraph no comment is required other than that made there and in the reviews of the respective surveys.

5. Condition of Survey.

a. Drag Records.

- (1) Much of the information in the end launch records such as towline length, notes in the "Remarks" column and times of positions were not copied into the guide launch records. Transfer of such information is important in as much as the end launch volume is not a permanent record.
- (2) In very few cases were check angles taken at tender positions (page 33, S. P. 118).
- (3) Drag position numbers and day letters were inked in red, some upper case, some lower case, with tender positions corresponding in case but inked in blue. S. P. 118 specifies upper case for drag positions and lower case for tender positions, the inference being that the same color be used for both.
- (4) Boat courses, which in some instances would have been of material help to the office verifier, were not recorded by the guide launch.

b. Field Plotting.

As in the case of H-6356 (1938) W. D., the field plotting was incomplete. The office verifier added shoreline from contemporary topographic surveys and inked all drag strips. The verifier also made numerous corrections. For example, 84 F buoy positions were moved from 15 to 25 meters because an erroneous towline length was used in the field plotting. Position ticks on the end launch side of the drag were changed to agree in time with those on the guide launch side. Differences in time of fixes was as much as 4 minutes. Such changes necessitated revisions in the subdivision of drag strips.

c. Descriptive Report.

The report should have been a little more comprehensive.



d. Skiff Drag.

The skiff drag used in Sitka Harbor and briefly mentioned under "Survey Methods" in the descriptive report is described in detail in Special Report 51 of 1938. Lieut. Comdr. C. K. Green annotates the special report as follows: "A drag with no towline must be operated at very slow speed and never against a current. This rig sounds o.k. if carefully used." In the review of the present survey it is noted that a fairly well authenticated shoal of 17-1/2 feet in lat. 57°03.14', long. 135°20.64' is apparently cleared by the skiff drag with effective depths of 23 and 24 feet. It is entirely possible that a drag unrestricted by towlines could, under certain conditions, slide over such a shoal without hanging up. Field parties should, therefore, limit the use of the skiff drag to investigations where use of the standard drag is utterly impracticable.

6. Compliance with Instructions for the Project.

Satisfactory except as noted in par. 3a, and 3c.

7. Additional Field Work Recommended.

None recommended for immediate attention. See preceding paragraph.

## 8. Reviewed by J. A. McCormick, September 6, 1939.

Inspected by H. R. Edmonston, September 14, 1939.

Examined and Approved:



T. B. Reed,  
Chief, Section of Field Records.



Chief, Division of Charts.



Chief, Section of Field Work.



Chief, Division of H. & T.

Applied to reconstruction of Chart 8244- 11/8/37- JFW  
Applied to Cht. 8281 Feb. 26, 1940 K.R.